



IBM PureFlex System 42U Rack

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At a glance

The new IBM® PureFlex System 42U Rack encloses the IBM Flex System components, maximizing and optimizing floor space.

The IBM PureFlex System 42U Rack (7953-94X) offers:

- 600 mm width to fit within a 24-inch floor tile
- 1100 mm rack depth for cable management space
- Up to six PDUs in rack side pockets
- Optional high-efficiency rear door heat exchanger (1164-95X)

Overview

The IBM PureFlex System 42U Rack provides an excellent 19-inch rack enclosure for your data center. Its 23.6-inch (600 mm) width allows it to be easily located on standard 24-inch floor tiles. Its 600 mm width combined with its 1100 mm depth plus its 42 EIA enclosure capacity, provides great footprint efficiency for your systems.

IBM has tested and certified the IBM PureFlex System 42U Rack, ensuring its use with the IBM PureFlex System.

The PureFlex 42U Rack has a lockable perforated front steel door providing ventilation, physical security, and visibility of indicator lights in the installed equipment within. In the rear, either a lockable perforated rear steel door (#EC02) or a lockable rear door heat exchanger or RDHX (1164-95X) is used. Lockable optional side panels (#EC03) increase the rack's aesthetics, help control airflow through the rack, and provide physical security. Multiple PureFlex 42U Racks can be bolted together (#EC04) to create a rack suite.

Up to six optional 1U PDUs can be placed vertically in the sides of the rack. Additional PDUs can be located horizontally, but use 1U of space in this position.

When ordered with an IBM PureFlex System, IBM will mount the server and I/O and PDUs associated with the PureFlex System order, and ship it to the client. Due to safety considerations the top area of the rack may not be loaded with equipment when shipped. Due to its height, special shipping handling procedures may be required. Black snap-in front filler panels for rack space which will be unoccupied are added by IBM Manufacturing before shipping. The filler panels help control airflow and improve the rack's appearance.

Standard features include:

- Front tip plate
- Air dam for controlling airflow between the rack and floor
- Square mounting holes following EIA 310-D standard
- Interior (rail-to-rail) depth of 715 mm (about 28 inches)
- Four leveling feet
- Cable egress ports on both top and bottom of rack

Key prerequisites

Refer to the [Hardware requirements](#) section.

Planned availability date

- May 21, 2012: For all features except for features EFD3, EFD4, and EFD5.
- June 15, 2012: For features EFD3, EFD4, and EFD5.

Description

IBM PureFlex system

The IBM PureFlex System consists of predefined, preconfigured Flex System components to simplify client purchasing and provide the total Flex System integrated value proposition.

The IBM PureFlex System 42U Rack is ordered as part of a PureFlex System. There are three IBM PureFlex System offerings available:

- IBM PureFlex System Express® for smaller installations (Feature #EFD1)
- IBM PureFlex System Standard for application systems (Feature #EFD2)
- IBM PureFlex System Enterprise for scalable cloud deployments; includes redundancy for resilient operation (Feature #EFD3)

A PureFlex System consists of:

- A Flex System Compute Node, chosen from:
 - Flex System p260 (7895-22X)
 - Flex System p460 (7895-42X)
 - Flex System x240 (7863-10X)

Note: The Flex System p260 does not offer an IBM PureFlex System Enterprise. The Flex System p460 does not offer an IBM PureFlex System Express. The IBM PureFlex System Enterprise requires two Compute Nodes.

- A Flex System Enterprise Chassis (7893-92X)
- A Flex System Manager (7955-01M)
- A Storwize® V7000 Disk System (2076-124)
- Two IBM 1455 BNT® Rack Switches G8264 Model 64C (With IBM PureFlex Enterprise only, with the Flex System p460)
- Two IBM 1455 BNT Rack Switches G8052 Model 48E (With IBM PureFlex Enterprise only, with the Flex System p460)
- Two IBM 2498 SAN24B-4 Express Model B24 (With IBM PureFlex Enterprise only, with the Flex System p460)
- An IBM PureFlex System 42U Rack (7953-94X)

Additional Flex System Compute Nodes, Flex System Chassis, IBM PureFlex 42U Racks, and Flex System Managers can be ordered once the basic requirements

for the IBM PureFlex System are met. These additional orders will be indicated by feature number EFD4 (Expansion Option) or EFD5 (Custom Expansion). The Flex System Manager is not available with EFD4. Storwize V7000 Disk Systems can be ordered separately without meeting the requirements for the IBM PureFlex System.

The following IBM PureFlex System configurations will not be supported until April 24, 2012:

- Expansion Option (#EFD4) on the Flex System Enterprise Chassis (7893-92X)
- Expansion Option (#EFD4) on the Storwize V7000 Disk System (2076-124)
- IBM PureFlex Enterprise (#EFD3) on the Flex System p460 Compute Node (7895-42X)
- IBM PureFlex Enterprise (#EFD3) and Expansion Option (#EFD4) on the IBM 1455 BNT Rack Switches (1455-64C/48E) and the IBM 2498 SASN24B-4 Express Model B24 (2498-B24)

Contact your local Sales Representative for custom configuration requests.

Information on minimum configurations and options when ordering those products can be found in their online *Sales Manuals* at

<http://gpt.itso.ibm.com/UsmWeb/welcome.do>

Product	Sales Manual	Type-Model
IBM Flex System p260 Compute Node		7895-22X
IBM Flex System p460 Compute Node		7895-42X
IBM Flex System x240 Compute Node		7863-10X
IBM Flex System Chassis		7893-92X
IBM PureFlex System 42U Rack		7953-94X
IBM Storwize V7000 Disk System		2076-124
IBM 1455 BNT Rack Switch G8264		1455-64C
IBM 1455 BNT Rack Switch G8052		1455-48E
IBM 2498 SAN24B-4 Express Model B24		2498-B24

For more information on IBM PureFlex Systems, visit

<http://www.ibm.com/pureflex>

The minimum PureFlex System 42U Rack requirements for the IBM PureFlex Express are:

1 x PureFlex System 42U Rack (7953-94X), with the following features:

4 x #4651	Rack Indicator, Rack #1
2 x #7189 or #7196	Optional PDUs
1 x #EC02 or #EC05	Rack Rear Door or RDHX
1 x #EC03	Side Doors
1 x #EC06	Rack Front Door (Blue)
1 x #ER01	Integrate Chassis in Rack
1 x #ER04	Rack Content Specify - 2076-124
1 x #ER1B	Reserve 1U empty space - bottom
1 x #ER1T	Reserve 1U empty space - top
1 x #ESC0	Shipping and Handling (No charge)
1 x #EFD1, #EFD4	PureFlex System Order Indicator

NOTE: #EFD4 does not require the following features: #ER01, #ER03, #ER04, #4651, #7189, or #7196. #EFD4 requires #4652 and either #EC03 or #EC04.

The minimum PureFlex System 42U Rack requirements for the IBM Flex Standard are:

1 x PureFlex System 42U Rack (7953-94X), with the following features:

4 x #4651	Rack Indicator, Rack #1
2 x #7189 or #7196	Optional PDUs
1 x #EC02 or #EC05	Rack Rear Door or RDHX

1 x #EC03	Side Doors
1 x #EC06	Rack Front Door (Blue)
1 x #ER01	Integrate Chassis in Rack
1 x #ER04	Rack Content Specify - 2076-124
1 x #ER1B	Reserve 1U empty space - bottom
1 x #ER1T	Reserve 1U empty space - top
1 x #ESCO	Shipping and Handling (No charge)
1 x #EFD2, #EFD4	PureFlex System Order Indicator

NOTE: #EFD4 does not require the following features: #ER01, #ER03, #ER04, #4651, #7189, or #7196. #EFD4 requires #4652 and either #EC03 or #EC04.

The minimum PureFlex System 42U Rack requirements for the IBM Flex Enterprise are:

1 x PureFlex System 42U Rack (7953-94X), with the following features:

6 x #4651	Rack Indicator, Rack #1
2 x #7189 or #7196	Optional PDUs
1 x #EC02 or #EC05	Rack Rear Door or RDHX
1 x #EC03	Side Doors
1 x #EC06	Rack Front Door (Blue)
1 x #ER01	Integrate Chassis in Rack
1 x #ER04	Rack Content Specify - 2076-124
4 x #0450	Rack Content Specify - 1455-64C/48E
2 x #ER06	Rack Content Specify - 2498-B24
1 x #ER1B	Reserve 1U empty space - bottom
1 x #ER1T	Reserve 1U empty space - top
1 x #ESCO	Shipping and Handling (No charge)
1 x #EFD3, #EFD4	PureFlex System Order Indicator

NOTE: #EFD4 does not require the following features: #ER01, #ER03, #ER04, #4651, #7189, or #7196. #EFD4 requires #4652 and either #EC03 or #EC04. #0450 and #ER06 are only required with the Flex System p460 Compute Node (7895-42X).

IBM PureFlex System 42U Rack

The IBM PureFlex System 42U Rack provides an excellent 19-inch rack enclosure for your data center. Its 23.6-inch (600 mm) width allows it to be easily located on standard 24-inch floor tiles. Its 600 mm width combined with its 1100 mm depth plus its 42 EIA enclosure capacity, provides great footprint efficiency for your systems.

IBM has tested and certified the IBM PureFlex System 42U Rack, ensuring its use with the IBM PureFlex System.

The PureFlex 42U Rack has a lockable perforated front steel door providing ventilation, physical security, and visibility of indicator lights in the installed equipment within. On the rear, either a lockable perforated rear steel door (#EC02) or a lockable rear door heat exchanger or RDHX (1164-95X) is used. Lockable optional side panels (#EC03) increase the rack's aesthetics, help control airflow through the rack, and provide physical security. Multiple PureFlex 42U Racks can be bolted together (#EC04) to create a rack suite.

Up to six 1U PDUs can be placed vertically in the sides of the rack. Additional PDUs can be located horizontally, but use 1U of space in this position.

When ordered with an IBM PureFlex System, IBM will mount the server and I/O and PDUs which are associated with the rack order and shipped from the same IBM Manufacturing site in the PureFlex 42U Rack and ship it to the client. Due to safety considerations the top area of the rack may not be loaded with equipment when shipped. Due to its height, special shipping handling procedures may be required.

Black snap-in front filler panels for rack space which will be unoccupied are added by IBM Manufacturing before shipping. The filler panels help control airflow and improve the rack's appearance.

Standard features include:

- Front tip plate
- Air dam for controlling airflow between the rack and floor
- Square mounting holes following EIA 310-D standard
- Interior (rail-to-rail) depth of 715 mm (about 28-inch)
- Four leveling feet
- Cable egress ports on both top and bottom of rack

Accessibility by people with disabilities

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

http://www.ibm.com/able/product_accessibility/index.html

Section 508 of the US Rehabilitation Act

IBM PureFlex System 42U Rack is capable as of April 27, 2012, when used in accordance with associated IBM documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested via the IBM website

http://www-03.ibm.com/able/product_accessibility/index.html

Product positioning

An IBM PureFlex System edition will be shipped in an IBM PureFlex 42U Rack. As of April 2012, placing other Power Systems™ or Power® I/O drawers or chassis in an IBM PureFlex 42U Rack has not been tested/certified by IBM Development/Test organizations.

The IBM PureFlex 42U Rack (7953-94X) differs from the IBM 42U enterprise rack (7014-B42 or 7014-T42) in several aspects. Both provide 42U of vertical space, are 1100 mm deep, and have an interior rail-to-rail depth of 715 mm. But the IBM PureFlex 42U Rack is 600 mm wide where the B42/T42 is 645 mm wide with side covers. For clients with 2-foot floor tiles, the extra 45 mm (1.77-inch) width of the enterprise rack can sometimes cause challenges when cutting holes in the floor tiles for cabling. On the other hand, the 45 mm exterior width translates into about 25 mm (1 inch) more working space inside the B42/T42 enterprise rack and can be helpful with additional space for cords/cables.

The B42/T42 is structurally a 36U rack with an additional 6U extension bolted on the top. The 6U extension can be removed if needed to allow the rack to be moved through shorter doors or elevators. The PureFlex 42U Rack is one unit and cannot be shortened.

The B42/T42 has side pockets holding up to four optional 1U PDUs, where the PureFlex 42U Rack can hold up to six optional 1U PDUs. The PDUs supported in the PureFlex 42U Rack are the feature numbers 7188, 7109, 7189, and 7196. These are the same PDUs as offered with the B42.

The B42/T42 is made of heavier steel and supports more weight (70 pounds versus 50 pounds per 1U or 31.7 kg versus 22.7 kg per 1U) though this is probably not a concern in most situations. The B42/T42 has an optional ruggedness feature which allows cable tie downs to the floor and extra stiffening in the rack. B42/T42 clients

in earthquake-prone areas often order this feature. The PureFlex 42U Rack does not offer this feature.

The locks used on the B42/T42 and PureFlex 42U Rack are identical and are sourced from the same lock vendor.

The rear door heat exchanger or RDHX available on the PureFlex 42U Rack can remove about twice the heat as the RDHX available on the B42/T42 (30,000 kW versus 15,000 kW).

The PureFlex 42U Rack has both top and bottom egress ports and has been tested and certified with these four ports. There are two egress ports on the top: one at the front and one at the rear. Likewise there are two egress ports on the bottom, one at the front and one at the rear. The B42/T42 supports bottom egress.

The B42/T42 and PureFlex 42U Rack all have a maintenance charge after warranty. The B42/T42 has a 1 year warranty. The PureFlex 42U Rack has a 3 year warranty.

Product number

The following are newly announced features on the specific models of the IBM Power Systems 7953 machine type:

Description	MT	Model	Feature
IBM PureFlex System 42U Rack	7953	94X	
Solution Delivery Integration (SDI) Bulk MES Order Indicator	7953	94X	0003
Rack Content Specify: 1455-64C/48E -- 1 EIA	7953	94X	0450
US TAA Compliance Indicator	7953	94X	0983
Custom Service Specify, Rochester Minn, USA	7953	94X	1140
Rack Indicator, Rack #1	7953	94X	4651
Rack Indicator, Rack #2	7953	94X	4652
Rack Indicator, Rack #3	7953	94X	4653
Rack Indicator, Rack #4	7953	94X	4654
Rack Indicator, Rack #5	7953	94X	4655
Rack Indicator, Rack #6	7953	94X	4656
Rack Indicator, Rack #7	7953	94X	4657
Rack Indicator, Rack #8	7953	94X	4658
Rack Indicator, Rack #9	7953	94X	4659
Rack Indicator, Rack #10	7953	94X	4660
Rack Indicator, Rack #11	7953	94X	4661
Rack Indicator, Rack #12	7953	94X	4662
Rack Indicator, Rack #13	7953	94X	4663
Rack Indicator, Rack #14	7953	94X	4664
Rack Indicator, Rack #15	7953	94X	4665
Rack Indicator, Rack #16	7953	94X	4666
4.3m (14-Ft) 3PH/24A Power Cord	7953	94X	6489
4.3m (14-Ft) 1PH/48A Pwr Cord	7953	94X	6491
4.3m (14-Ft) 1PH/48-60A Pwr Cord	7953	94X	6492
Intelligent PDU+, 1 EIA Unit, Universal UTG0247 Connector	7953	94X	7109
Power Distribution Unit	7953	94X	7188
Power Distribution Unit (Worldwide) - 1 EIA Unit, Universal, UTG0247 Connector	7953	94X	7189
Power Distribution Unit (US) - 1 EIA Unit, Universal, Fixed Power Cord	7953	94X	7196
OEM (Generic) Indicator	7953	94X	7770
OEM (GROUPE BULL) Indicator	7953	94X	7773
OEM (Hitachi) Indicator	7953	94X	7775

OEM Publications for IBM Logo Product	7953	94X	7779
Field Integration Indicator, Ship Empty Rack	7953	94X	9002
Order Routing Indicator- System Plant	7953	94X	9169
Day Indicator	7953	94X	9462
Hour Indicator	7953	94X	9463
Minute Indicator	7953	94X	9464
Product Renovated by IBM Indicator	7953	94X	9993
Rack Front Door (Black)	7953	94X	EC01
Rack Rear Door	7953	94X	EC02
Rack Side Cover	7953	94X	EC03
Rack Suite Attachment Kit	7953	94X	EC04
Rear Door Heat Exchanger Indicator	7953	94X	EC05
Rack Front Door (Blue)	7953	94X	EC06
OEM Rack Front Door (Black)	7953	94X	EC11
IBM PureFlex System Express Indicator	7953	94X	EFD1
IBM PureFlex System Standard Indicator	7953	94X	EFD2
IBM PureFlex System Enterprise Indicator	7953	94X	EFD3
IBM PureFlex System Expansion Indicator	7953	94X	EFD4
IBM PureFlex System Custom Configuration Indicator	7953	94X	EFD5
Rack Content Specify: 7893-92X	7953	94X	ER01
Rack Content Specify: 2076-224 - 2U	7953	94X	ER03
Rack Content Specify: 2076-124 - 2U	7953	94X	ER04
Rack Content Specify: 2498-B24 - 1U	7953	94X	ER06
Reserve 1U at Bottom of Rack	7953	94X	ER1B
Reserve 1U at Top of Rack	7953	94X	ER1T
RFID Tags for Servers, Compute Nodes, Chassis, Racks, and HMCs	7953	94X	ERF1
S&H - No Charge	7953	94X	ESC0
Rack S&H-a	7953	94X	ESC1

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld® ID and password are required (use IBM ID).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=112-084>

Publications

IBM Power Systems hardware documentation provides you with the following topical information:

- System overview
- Planning for the system
- Installing and configuring the system
- Working with consoles, terminals, and interfaces
- Managing system resources
- Working with operating systems and software applications
- Troubleshooting, service, and support

You can access the product documentation on a DVD (SK5T-7087) or at

<http://publib.boulder.ibm.com/infocenter/pseries/index.jsp>

The following information is shipped with the 7953-94X:

- Power Hardware Information DVD (SK5T-7087)
- Installing the 7953-94X
- Safety Information
- Statement of Warranty

Hardware documentation such as installation instructions, user's information, and service information is available to download or view at

<http://www.ibm.com/systems/support>

AIX® documentation can be found at the IBM AIX Information Center

<http://publib.boulder.ibm.com/infocenter/pseries/index.jsp>

Visit the IBM System Support Site, which contains the documentation for the hardware

<http://www.ibm.com/systems/support>

The IBM Systems Information Center provides you with a single information center where you can access product documentation for IBM systems hardware, operating systems, and server software. Through a consistent framework, you can efficiently find information and personalize your access. The IBM Systems Information Center

<http://publib14.boulder.ibm.com/infocenter/systems>

IBM Publications Center Portal

<http://www.ibm.com/shop/publications/order>

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided, as well as payment options by credit card. A large number of publications are available online in various file formats, which can currently be downloaded free of charge.

Services

Global Technology Services

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an on-demand business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or visit

<http://www.ibm.com/services/>

For details on available IBM Business Continuity and Recovery Services, contact your IBM representative or visit

<http://www.ibm.com/services/continuity>

For details on education offerings related to specific products, visit

<http://www.ibm.com/services/learning/index.html>

Select your country, and then select the product as the category.

Technical information

Specified operating environment

Physical specifications

IBM 7953 Model 94X Rack:

- Width: 600 mm (23.6 in) with side panels
- Depth: 1100 mm (43.3 in) with front and rear doors
- Height: 2015 mm (79.3 in) with standard ac power
- Weight: (Empty rack with doors and side panels): 187 kg (412 lb.)

To assure installability and serviceability in non-IBM industry-standard racks, review the installation planning information for any product-specific installation requirements.

Operating environment

- Temperature: 10°C to 40°C
- Relative humidity: 8% to 80%
- Maximum wet bulb: 27°C
- Sound power: None
- Temperature: 10°C to 40°C
- Relative humidity: 8% to 80%
- Maximum wet bulb: 27°C
- Sound power: None

Power requirements for Model 94X rack (when ordered with either optional feature number 7189 or feature number 7196):

- Operating voltage: 200 to 240 V ac 50 Hz/60 Hz
- Power Source Loading: 4.8 KVA per Power Distribution
- Unit (PDU) (rack may have up to eight PDUs)

The rack power distribution system provides 200 - 240 V ac (50 Hz/60 Hz) to the system components (drawers) Each PDU is capable of providing up to 4.8 KVA.

7953-94X Rack:

- Power consumption in active mode: 0 watts
- Power consumption in energy savings mode: 0 watts

EMC conformance classification for Model 94X Rack:

The EMC conformance and classification of the rack is dependent on the system and expansion drawers housed in the rack. For specific information about EMC conformance for your application, refer to the documentation shown with the system and expansion drawers being purchased with the rack. These racks are not EMC enclosures and are not designed to improve the EMC performance of the equipment contained in the rack.

Product Safety/Country Testing/Certification for 7953-94X when shipped as stand-alone rack:

- CAN/CSA-C22.2 No. 60950-00
- UL 60950, Third Edition

7953-94X when shipped with supported IBM PureFlex System servers and attached modules:

- CAN/CSA-C22.2 No. 60950-00
- UL 60950, Third Edition
- CE Mark (EN60950)
- IEC 60950 (CB Certificate and CB Test Report)

Hardware requirements

Each 7953-94X must include a minimum of the following items:

- Base 42U Rack
- One front door (#EC06)
- One rear door chosen from:
 - Standard rear door, flat black (#EC02)
 - Rear Door Heat Exchanger (RDHX) (#EC05). This rear door must be ordered with machine type-Model 1164-95X.
- One Shipping and Handling -- No Charge (#ESC0)

Limitations

Installation requirements

- A maximum of four IBM Flex System Enterprise Chassis (7893-92X) can be installed in a 94X rack
 - The bottom two IBM Flex System Enterprise Chassis can be factory-installed and fully populated.
 - The third IBM Flex System Enterprise Chassis from the bottom cannot be installed in the factory.
 - The fourth IBM Flex System Enterprise Chassis from the bottom cannot be installed in the factory.

Rack doors/side panels

- A rack must have a front door. An IBM PureFlex System 42U Rack uses #EC06 and does not use a different front door feature.
- A rack must have a side panel unless it is joined to an adjacent rack with the rack suite attachment kit (#EC04). A suite of racks with a quantity of N racks joined together would typically require a quantity of N-1 rack suite attachment kits (#EC04) and two side panels (#EC03) to cover the two ends of the suite of racks. Side panels (#EC03) are optional for those clients that plan to attach one rack to another rack using the rack suite attachment kit (#EC04). Including a side panel helps ensure optimal airflow through the rack and is required when a rear door heat exchanger is used. However, including a side panel limits some cabling options going rack-to-rack horizontally with the rear doors closed.
- Either a standard rear door (#EC02) or the Rear Door Heat Exchanger Indicator (#EC05) must be on an IBM PureFlex System 42U Rack (7953-94X) order. Feature number EC05 indicates that the IBM Rear Door Heat Exchanger (1164-95X) is ordered for the 7953-94X rack. #EC05 requires #EC03.

Power Distribution Units (PDU)

- A minimum of two PDUs (#7189 or #7196) are required for each PureFlex System. Additional PDUs can be added. PDUs must be added in pairs of two for redundancy.
- PDU feature number 7189 can be used in all geographies. One rack line cord is needed for each PDU. The total rated amperage will depend on the line cord. Line cord features are 6653, 6667, 6489, 6491, 6492.
- PDU feature number 7196 comes equipped with a fixed line cord. No line cord features are orderable.

- There is no maximum number of PDUs. Each feature 7196 or feature 7189 PDU consumes one of six vertical mounting bays. Each PDU beyond six will consume 1U of rack space. Therefore, the U capacity of the rack is reduced by the number of PDUs ordered beyond six.

Planning information

Cable orders

No cables required.

Security, auditability, and control

This product uses the security and auditability features of host software and application software.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

IBM Electronic Services

IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but complementary, elements: Electronic Services news page and Electronic Services Agent.

The Electronic Services news page is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The Electronic Service Agent™ is no-additional-charge software that resides on your server. It monitors events and transmits system inventory information to IBM on a periodic, client-defined timetable. The Electronic Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to deliver proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent is made available to IBM service support representatives when they help answer your questions or diagnose problems. Installation and use of IBM Electronic Service Agent for problem reporting enables IBM to provide better support and service for your IBM server.

To learn how Electronic Services can work for you, visit

<http://www.ibm.com/support/electronic>

Terms and conditions

Volume orders: Contact your IBM representative.

IBM Global Financing

Yes

Warranty period

Three years.

An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature that replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature are the same as those for the machine in which it is installed.

Warranty service

If required, IBM provides repair or exchange service depending on the types of warranty service specified for the machine. IBM will attempt to resolve your problem over the telephone, or electronically via an IBM website. You must follow the problem determination and resolution procedures that IBM specifies. Scheduling of service will depend the time of your call and is subject to parts availability. If applicable to your product, parts considered Customer Replaceable Units (CRUs) will be provided as part of the machine's standard warranty service.

Service levels are response-time objectives and are not guaranteed. The specified level of warranty service may not be available in all worldwide locations. Additional charges may apply outside IBM's normal service area. Contact your local IBM representative or your reseller for country-specific and location-specific information.

CRU service

IBM provides replacement CRUs to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM upon your request. CRUs are designated as being either a Tier 1 (mandatory) or a Tier 2 (optional) CRU.

Tier 1 CRU:

Installation of Tier 1 CRUs is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation.

Tier 2 CRU:

You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge.

Based upon availability, CRUs will be shipped for next-business-day (NBD) delivery. IBM specifies, in the materials shipped with a replacement CRU, whether a defective CRU must be returned to IBM. When return is required, return instructions and a container are shipped with the replacement CRU. You may be charged for the replacement CRU if IBM does not receive the defective CRU within 15 days of your receipt of the replacement.

The following parts have been designated as Tier 1 CRUs:

- Power cord
- Power Distribution Unit (PDU)

On-site Service

IBM will repair the failing machine at your location and verify its operation. You must provide a suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose.

Service level is:

- 9 hours per day, Monday through Friday, excluding holidays, next-business-day response. Calls must be received by 5:00 p.m. local time in order to qualify for next-business-day response.

Non-IBM parts support

Warranty service: IBM is now shipping machines with selected non-IBM parts that contain an IBM field replaceable unit (FRU) part number label. These parts are to be serviced during the IBM machine warranty period. IBM is covering the service on these selected non-IBM parts as an accommodation to their clients, and normal warranty service procedures for the IBM machine apply.

Non-IBM parts service

IBM is now shipping machines with selected non-IBM parts that contain an IBM field replaceable unit (FRU) part number label. These parts are to be serviced during the IBM machine warranty period. IBM is covering the service on these selected non-IBM parts as an accommodation to their clients, and normal warranty service procedures for the IBM machine apply.

International Warranty Services (IWS)

IWS is available in selected countries or regions.

The warranty service type, for example, On-site repair and customer replaceable unit, and service level, 9 x 5 next-business-day and 24 x 7, provided in the servicing country may be different from that provided in the country in which the machine was purchased.

Under IWS, warranty service will be provided with the prevailing warranty service type and service level available for the IWS-eligible machine type in the servicing country and the warranty period observed will be that of the country in which the machine was purchased.

To determine the eligibility of your machine and to view a list of countries where service is available, visit

<http://www-947.ibm.com/support/entry/portal/docdisplay?Indocid=MIGR-5070246>

For more information on IWS, refer to Services Announcement [601-034](#), dated September 25, 2001.

Warranty service upgrades

During the warranty period, warranty service upgrades provide an enhanced level of On-site Service for an additional charge. A warranty service upgrade must be purchased during the warranty period and is for a fixed term (duration). It is not refundable or transferable and may not be prorated. If required, IBM will provide the warranty service upgrade enhanced level of On-Site Service acquired by the client. Service levels are response-time objectives and are not guaranteed. Refer to the [Warranty service upgrades](#) section for additional details.

IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Following problem determination, if IBM determines on-site service is required, scheduling of service will depend upon the time of your call, machine technology and redundancy, and availability of parts.

On-site Service

IBM will repair the failing machine at your location and verify its operation. You must provide a suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well lit, and suitable for the purpose. The following on-site response-time objectives are available as warranty service upgrades for your machine.

The service level is:

- 9 hours per day, Monday through Friday, excluding holidays, 4-hour average, same-business-day response
- 24 hours per day, 7 days a week, 4-hour average response, same day
- 24 hours per day, 7 days a week, 2-hour average response, same day

Note: Canada does not offer 2-hour response option.

Customer Replaceable Units (CRUs) may be provided as part of the machine's standard warranty CRU Service except that you may install a CRU yourself or request IBM installation, at no additional charge, under the CRU and On-site Service level specified above. For more information about the CRU Service, refer to the warranty information.

Maintenance services

If required, IBM provides repair or exchange service depending on the types of maintenance service specified for the machine. IBM will attempt to resolve your problem over the telephone or electronically, through an IBM website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Scheduling of service will depend upon the time of your call and is subject to parts availability. Service levels are response-time objectives and are not guaranteed. The specified level of maintenance service may not be available in all worldwide locations. Additional charges may apply outside IBM's normal service area. Contact your local IBM representative or your reseller for country-specific and location-specific information. The following service selections are available as maintenance options for your machine type.

On-site Service

IBM will repair the failing machine at your location and verify its operation. You must provide a suitable working area to allow disassembly and reassembly of the IBM machine. The area must be clean, well-lit, and suitable for the purpose.

Service levels are:

- 9 hours per day, Monday through Friday, excluding holidays, next-business-day response
- 9 hours per day, Monday through Friday, excluding holidays, 4-hour average response, same-business day
- 24 hours per day, 7 days a week, 4-hour average response, same day
- 24 hours per day, 7 days a week, 2-hour average response, same day

Note: Canada does not offer 2-hour response option.

Customer Replaceable Unit Service

If your problem can be resolved with a CRU (for example, keyboard, mouse, speaker, memory, or hard disk drive), and depending upon the maintenance service offerings in your geography, IBM will ship the replacement CRU to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM upon your request.

Based upon availability, CRUs will be shipped for next-business-day delivery. IBM specifies, in the materials shipped with a replacement CRU, whether a defective CRU must be returned to IBM. When return is required, 1) return instructions and a container are shipped with the replacement CRU, and 2) you may be charged for the replacement CRU if IBM does not receive the defective CRU within 15 days of your receipt of the replacement.

CRUs may be provided as part of the machine's standard maintenance service except that you may install a CRU yourself or request IBM installation, at no additional charge, under any of the On-site Service levels specified above.

Non-IBM parts service

Under certain conditions, IBM provides services for selected non-IBM parts at no additional charge for machines that are covered under warranty service upgrades or maintenance services.

This service includes hardware problem determination (PD) on the non-IBM parts (for example, adapter cards, PCMCIA cards, disk drives, memory) installed within IBM machines and provides the labor to replace the failing parts at no additional charge.

If IBM has a Technical Service Agreement with the manufacturer of the failing part, or if the failing part is an accommodations part (a part with an IBM FRU label), IBM may also source and replace the failing part at no additional charge. For all other non-IBM parts, clients are responsible for sourcing the parts. Installation labor is provided at no additional charge, if the machine is covered under a warranty service upgrade or a maintenance service.

Usage plan machine

No

IBM hourly service rate classification

Two

When a type of service involves the exchange of a machine part, the replacement may not be new, but will be in good working order.

Field-installable features

Yes

Model conversions

No

Machine installation

Customer setup. Customers are responsible for installation according to the instructions IBM provides with the machine.

Graduated program license charges apply

No

Licensed machine code

This product does not contain Licensed Internal Code or Licensed Machine Code.

Educational allowance

A reduced charge is available to qualified education clients. The educational allowance may not be added to any other discount or allowance.

The educational allowance is 5% for the products in this announcement.

Prices

For additional information and current prices, contact your local IBM representative.

The following are newly announced features on the specific models of the IBM Power Systems 7953 machine type:

Description	Model Number	Feature Number	Initial/ MES/ Both/ Support	RP CSU MES
IBM 7953-94X	94X			Yes
Rack Content Spec: 1455-1EIA	94X	0450	Initial	N/A No
US TAA Compliance Indicator	94X	0983	Both	Yes No
Custom Serv. Specify, Roch	94X	1140	Both	Yes No
Rack Indicator, Rack 1	94X	4651	Initial	N/A No
Rack Indicator, Rack 2	94X	4652	Initial	N/A No
Rack Indicator, Rack 3	94X	4653	Initial	N/A No
Rack Indicator, Rack 4	94X	4654	Initial	N/A No
Rack Indicator, Rack 5	94X	4655	Initial	N/A No
Rack Indicator, Rack 6	94X	4656	Initial	N/A No
Rack Indicator, Rack 7	94X	4657	Initial	N/A No
Rack Indicator, Rack 8	94X	4658	Initial	N/A No
Rack Indicator, Rack 9	94X	4659	Initial	N/A No
Rack Indicator, Rack 10	94X	4660	Initial	N/A No
Rack Indicator, Rack 11	94X	4661	Initial	N/A No
Rack Indicator, Rack 12	94X	4662	Initial	N/A No
Rack Indicator, Rack 13	94X	4663	Initial	N/A No
Rack Indicator, Rack 14	94X	4664	Initial	N/A No
Rack Indicator, Rack 15	94X	4665	Initial	N/A No
Rack Indicator, Rack 16	94X	4666	Initial	N/A No
4.3m (14 Ft) 3PH/24A Power Cor	94X	6489	Both	Yes No
4.3m (14 Ft) 1PH/48A Pwr Cord	94X	6491	Both	Yes No
4.3m (14 Ft) 1PH/48 60A Pwr Co	94X	6492	Both	Yes No
IIntelligent PDU+ 1 EIA Unit	94X	7109	Both	Yes No
Power Distribution Unit	94X	7188	Both	Yes No
PowDistribUnit(WW)UTG0247Conn	94X	7189	Both	Yes No

PowDistribUnit(US)Fixed PowCrd	94X	7196	Both	Yes	No
Field Integration Indicator	94X	9002	Initial	N/A	No
Order Routing Indicator System	94X	9169	Initial	N/A	No
Day Indicator	94X	9462	Initial	N/A	No
Hour Indicator	94X	9463	Initial	N/A	No
Minute Indicator	94X	9464	Initial	N/A	No
Rack Front Door (Black)	94X	EC01	Both	Yes	No
Rack Rear Door	94X	EC02	Both	Yes	No
Rack Side Cover	94X	EC03	Both	Yes	No
Rack Suite Attachment Kit	94X	EC04	Both	Yes	No
Rear Door Heat Exchanger Ind.	94X	EC05	Both	Yes	No
Rack Front Door (Blue)	94X	EC06	Initial	N/A	No
OEM Rack Front Door (Black)	94X	EC11	Both	Yes	No
PureFlex System Express Ind.	94X	EFD1	Initial	N/A	No
PureFlex System Standard Ind.	94X	EFD2	Initial	N/A	No
PureFlex System Enterprise Ind	94X	EFD3	Initial	N/A	No
PureFlex System Expansion Ind	94X	EFD4	Initial	N/A	No
PureFlex System Custom Ind.	94X	EFD5	Initial	N/A	No
Specify: 7893-92X	94X	ER01	Initial	N/A	No
Rack Content Specify: 2076-224	94X	ER03	Initial	N/A	No
Rack Content Specify: 2076-124	94X	ER04	Initial	N/A	No
Rack Content Specify: 2498-B24	94X	ER06	Initial	N/A	No
Reserve 1U at Bottom of Rack	94X	ER1B	Initial	N/A	No
Reserve 1U at Top of Rack	94X	ER1T	Initial	N/A	No
RFID Tags for Compute Nodes	94X	ERF1	Initial	N/A	
S&H - No Charge	94X	ESC0	Initial	N/A	No
Rack S&H-a	94X	ESC1	Initial	N/A	No

Pricing terms

Prices in the following PDF prices link are suggested list prices on day of announcement for the U.S. only. They are provided for your information only. Dealer prices may vary, and prices may also vary by country. IBM list price does not include tax or shipping and is subject to change without notice.

[ENUS-112-084-LIST_PRICES_2012_04_11.PDF](#)

Maintenance charges

For more information about maintenance and pricing, contact your IBM Sales Representative or your IBM Business Partner, or call 1-800-IBM-CALL (1-800-426-2255).

For ServiceElect (ESA) maintenance service charges, contact IBM Global Services at 888-IBM-4343 (426-4343).

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